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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/702,038

11/06/2003

Kouichi Katou

P21-163397M/YS

9362

21254 7590 02/17/2009  
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EXAMINER

BOSWELL, CHRISTOPHER J

ART UNIT

PAPER NUMBER

3673

MAIL DATE

DELIVERY MODE

02/17/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/702,038	<b>Applicant(s)</b> KATOU ET AL.	
	<b>Examiner</b> CHRISTOPHER BOSWELL	<b>Art Unit</b> 3673	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 27-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 27-32, 34, 36-38, 45 and 46 is/are rejected.
- 7) ☒ Claim(s) 33, 35 and 39-44 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 44 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 44 recites the limitation "the extension portion" in line 2. There is insufficient antecedent basis for this limitation in the claim. To further prosecution, the examiner believes this claim to depend from claim 43.

### ***Claim Rejections - 35 USC § 102***

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 27, 28, 31, 32, 34, 36-38 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Number 2,136,854 to Knott.

Knott discloses a lock apparatus for attaching a container member (1) to a support member openably, the lock apparatus comprising an operation handle (9), a spring (12 and 17), which is movably supported by the container member, a slide pin (15), which is urged in a direction of a lock hole (hole aligned with the ends of the slide pins) defined on the support member by the spring, respectively, and a cam member (6 and 10) to which a rear end portion of the slide pin is fitted to urge the slide pin to project and retract (figure 3), wherein when the

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operation handle is operated in a swing manner (figure 4), a front end portion of the slide pin is retracted from the lock hole of the support member against pressure of the spring (column 2, lines 43-45), and wherein a cylinder (8) that accommodates the cam member is formed on the operation handle (figure 3), as in claim 1.

Knott also discloses the cylinder accommodates the spring (the cylinder accommodates spring 12), as in claim 27, and a support frame (4) that supports the operation handle, wherein the operation handle supports the spring and the cam member (figures 3 and 4), as in claim 28, as well as the cylinder includes a projected portion (the flat surface of the cavity of the cylinder) on an inner face thereof, and wherein the cam member includes a cam groove (the flat surface of the spindle) having a guide portion (the corner of the spindle to allow proper insertion) for guiding the projected portion into the cam groove, as in claim 31.

Knott further discloses the cylinder includes a pair of projected portions (the flat surfaces of the cavity of the cylinder) on an inner face thereof, the pair of projected portions being opposed to each other, and wherein the cam member includes a pair of cam grooves (the flat surfaces of the spindle) each including a guide portion (the corner of the spindle to allow proper insertion) for guiding the one of the projected portions thereinto, as in claim 32, and where the cylinder slidably supports the cam member (8 receives spindle 6 of the cam member), as in claim 36, as well as the cylinder comprises a pair of projected portions (the flat surfaces of the cavity of the cylinder) on an inner face thereof, the pair of projected portions being opposed to each other such that a first of the pair of projected portions is formed on an upper portion of the inner face and a second of the pair of projected portions is formed on a lower portion of the inner face (figures 2, 5 and 6), and wherein the cam member includes a pair of cam grooves (the flat

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surfaces of the spindle) each including a guide portion (the corner of the spindle to allow proper insertion) for guiding the one of the projected portions thereinto, as in claim 37.

Knott additionally discloses the cylinder comprises a pair of projected portions (the flat surfaces of the cavity of the cylinder) on an inner face thereof, the pair of projected portions being disposed opposed to each other with respect to a center of the cylinder (figures 2, 5 and 6), and wherein the cam member includes a pair of cam grooves (the flat surfaces of the spindle) each including a guide portion (the corner of the spindle to allow proper insertion) for guiding the one of the projected portions thereinto, as in claim 38.

Knott also discloses a method of assembling a lock apparatus for attaching a container member (1) to a support member openably, the method comprising providing the lock apparatus, the lock apparatus comprising an operation handle (9), a spring (12 and 17), which is movably supported by the container member, and a cam member (6 and 10), and inserting a slide pin (15) into the cam member, the slide pin being urged in a direction of a lock hole defined on the support member by the spring (column 2, lines 43-45), wherein a rear end portion of the slide pin is fitted to the cam member to urge the slide pin to project and retract (figure 3), wherein when the operation handle is operated in a swing manner (figure 4), a front end portion of the slide pin is retracted from the lock hole of the support member against pressure of the spring (column 2, lines 43-45), and wherein a cylinder (8) that accommodates the cam member is formed on the operation handle (figure 3), as in claim 45.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knott, as applied above, in view of U.S. Patent Number 5,413,391 to Clavin et al.

Knott teaches of a lock apparatus for attaching a container member to a support member openably, the lock apparatus comprising an operation handle, a spring, a slide pin, urged in a direction of a lock hole defined on the support member by the spring, and a cam member, a cylindrical portion that accommodates the cam member formed on the operation handle, and a support frame (4) that includes bent walls (5) bent to extend in a direction towards the cylindrical portion at both side edges thereof, wherein each of the bent walls includes an opening (bore that allows the cam member to extend through the walls) that allows a front end of the cam member to go therethrough, as in claim 29, wherein the cam member is supported by the opening (figure 3) so that the front end is not rotatable but can go through the opening (figure 2), as in claim 30. However, the support frame does not have a screw hole on a rear surface. Clavin et al. teaches of a lock apparatus comprising an operation handle (22), a spring (26), a slide pin (25), and a cam member (23), and a support frame (29) that include a screw hole (apertures that accept screws 30) on a rear surface side thereof that includes bent walls (the walls that extend orthogonal to the rear surface) bent to extend in a direction towards the handle, wherein the bent walls includes an opening (openings that allow the bolt to extend through), such that the lock apparatus can be

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attached to a housing by the use of screws (30). It would have been obvious to one with ordinary skill in the art to use screws and associated screw holes in the support frame in the apparatus of Knott to attach the lock apparatus to a container member securely as taught by Calvin et al. Using the known technique of screws and associated screw holes for the predictable results of securely attaching a lock apparatus to a container member of Knott would have been obvious to one of ordinary skill.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knott, as applied above, in view of Clavin et al.

Rauchhaus teaches the invention substantially as claimed. However, Knott does not disclose an O-ring which slide contacts with the cylinder and a cylindrical portion of the cam member simultaneously. Clavin et al. teaches of a lock apparatus (figure 1) having a handle (22) that actuates a cam member (23 and 31), a locking bolt, a cylindrical portion (93) that houses the cam member, and an O-ring (35) that contacts the cylindrical portion and a cylindrical portion (85) of the cam member (figure 15). All of the component parts are known in Knott and Clavin et al. The only difference is the combination of the “old elements” into a single device by mounting them on a single chassis. Thus it would have been obvious to one having ordinary skill in the art to apply an O-ring as taught by Clavin et al. between the cylindrical portion of the handle and a cylindrical portion of the cam member in Knott, since an O-ring disposed within the lock apparatus is in no way dependent on functionality of the lock apparatus and the associated components, and the O-ring could be used in combination with lock apparatus to achieve the predictable results of having a weather proof seal within the lock apparatus.

Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Knott, as applied above.

Knott discloses a lock apparatus for attaching a container member to a support member openably, the lock apparatus comprising an operation handle (9), a spring (12 and 17), which are movably supported by the container member, a slide pin (15), which are urged in a direction of a lock hole (hole aligned with the end of the slide pin) defined on the support member by the spring, respectively, and a cam member (6 and 10) to which a rear end portion of the slide pins is fitted to urge the slide pin to project and retract (figure 3), and wherein when the operation handle is operated in a swing manner (figure 4), a front end portion of the slide pin is retracted from the lock hole of the support member against pressure of the spring (column 2, lines 43-45), and wherein a cylinder (8) that accommodates the cam member is formed on the operation handle (figure 3), as in claim 46. However, Knott does not disclose a plurality of springs, slide pins and cam members. Wherein, duplicating the components of a prior art device is a design consideration within the skill of the art. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). It would have been obvious to one with ordinary skill in the art at the time the invention was made to incorporate a second slide pin with the associated spring and cam member, where a cam with an inverse cam profile would be attached to the opposed end of the cam spindle with a corresponding slide pin actuated by the swing motion of the handle in order to multiple latching points to establish a secure attachment to the support member.



***Allowable Subject Matter***

Claims 33, 35 and 39-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The claims are allowable over the prior art of record because the teachings of the references taken as a whole do not teach or render obvious the combination set forth, including that of the cam member having a cam groove having a lock portion locking the cam member at a position that the cam member is retracted in the cylinder, an end portion being a bifurcated structure having an elastic piece, and the cam member is substantially entirely contained within the cylinder, wherein the end portion, having a generally U-shaped extension portion extending from the end portion, the generally U-shaped extension portion comprising a through hole for engaging a contact piece disposed on the cam member, as well as the cam member includes a generally square tubular portion, and wherein an extension portion of the slide pin is inserted into the generally square tubular portion and the slide pin further includes a pair of projections () disposed on an extension portion.

***Response to Arguments***

Applicant's arguments with respect to claims 1 and 27-34 have been considered but are moot in view of the new ground(s) of rejection. A previously applied reference, Knott, substantially discloses a lock apparatus having a cylinder that accommodates the cam member is formed on the operation handle.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to further show the state of the art with respect to side lock assemblies:

U.S. Patent Number 7,455,333 to Ookawara, U.S. Patent Number 7,048,311 to Sawatani et al., U.S. Patent Number 6,834,895 to Lin, U.S. Patent Number 6,733,049 to Piorkowski et al., U.S. Patent Number 6,622,883 to Wu et al., U.S. Patent Number 6,460,902 to Kyle, U.S. Patent Number 6,350,418 to Venderpool et al., U.S. Patent Number 5,342,101 to Shih, U.S. Patent Number 5,149,152 to Lanius, U.S. Patent Number 4,118,055 to Bischoff, Jr., U.S. Patent Application Publication Number 2007/0163310 to Ookawara et al., U.S. Patent Application Publication Number 2004/0256863 to Tsai.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER BOSWELL whose telephone number is (571)272-7054. The examiner can normally be reached on 9:00 - 4:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Engle can be reached on (571) 272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher Boswell  
Examiner  
Art Unit 3673

/Patricia L Engle/  
Supervisory Patent Examiner,  
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CJB /cb/  
February 3, 2009